

Having thus, described the invention, what is claimed is:

1. A hydraulic continuously variable transmission, comprising:

a swash plate plunger pump comprising a pump swash plate and a pump cylinder adjacent said pump swash plate;

a swash plate plunger motor comprising a motor swash plate and a motor cylinder adjacent said motor swash plate;

a swash plate support member for supporting one of said swash plates;

an output shaft extending through and supporting said pump cylinder and said motor cylinder, said output shaft being rotatably supported through a plurality of rotatable bearings, wherein one of said rotatable bearings is attached to said swash plate support member and comprises an inner race and an outer race; and

a closed hydraulic circuit interconnecting said swash plate plunger pump and said swash plate plunger motor;

wherein at least one of said pump swash plate and said motor swash plate is supported by said swash plate support member so as to be pivotally movable, with a swash plate angle

thereof being variably adjustable;

and wherein the inner race of the rotatable bearing attached to said swash plate support member is recessed, relative to the outer race thereof, on the side facing said pivotally movable swash plate.

2. The hydraulic continuously variable transmission of claim 1, wherein said motor swash plate comprises said pivotally movable swash plate, and further comprising a motor casing for supporting said swash plate support member.

3. The hydraulic continuously variable transmission of claim 2, wherein said motor casing has a concave hemispherical support socket formed therein, and wherein said swash plate support member comprises a motor pivot member supported through sliding contact with said support socket of said motor casing.

4. The hydraulic continuously variable transmission of claim 3, wherein said motor pivot member has an end portion with a substantially flat surface which is substantially perpendicular

to the axis thereof.

5. A hydraulic continuously variable transmission, comprising:

a hollow transmission housing;

a motor casing disposed within said transmission housing;

a motor pivot member supported by said motor casing;

a swash plate plunger pump disposed within said housing and comprising a pump swash plate and a pump cylinder;

a swash plate plunger motor rotatably supported on said motor pivot member and comprising a motor swash plate and a motor cylinder; and

an output shaft extending through and supporting said pump cylinder and said motor cylinder, said output shaft being rotatably supported in said housing through a plurality of rotatable bearings, wherein one of said rotatable bearings is attached to said motor pivot member and comprises an inner race and an outer race;

wherein said motor swash plate is supported by said motor pivot member so as to be pivotally movable, with a swash plate angle thereof being variably adjustable;

and wherein the inner race of the rotatable bearing attached to said motor pivot member is recessed relative to the outer race thereof on the side facing said motor swash plate.

6. The hydraulic continuously variable transmission of claim 5, wherein said motor casing has a concave hemispherical support socket formed therein, and wherein said motor pivot member is supported through sliding contact with said support socket of said motor casing.

7. The hydraulic continuously variable transmission of claim 5, wherein said motor pivot member has an end portion with a substantially flat surface which is substantially perpendicular to the axis thereof.